# DYES FOR LAKES

NATIONAL ANILINE & CHEMICAL CO.
INCORPORATED
NEW YORK

*Executive Offices of the*
NATIONAL ANILINE & CHEMICAL CO., INC.
*located at*
40 Rector Street, New York

BH-825392

# DYES FOR LAKES

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NATIONAL ANILINE & CHEMICAL COMPANY, INC.

*Executive Offices*: 40 RECTOR STREET, NEW YORK

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BUFFALO
MARCUS HOOK

NATIONAL ANILINE & CHEMICAL CO., Inc.

*The National Aniline & Chemical Co., Inc. herewith presents the first edition of "Dyes for Lakes".*

*In this card is shown a series of lakes produced with "National" Dyes together with the formulæ whereby these lakes were obtained.*

*As the careful selection of dyes and appropriate methods of precipitation is of paramount importance, this card should prove of considerable value to the lake manufacturer.*

# *Methods for the Production of Lakes*

## 1. *National Auramine NAC*

| | | |
|---|---|---|
| 10 | lbs. | Aluminum Sulfate dissolved in |
| 12½ | gals. | Water |
| | | Precipitate with |
| 5 | lbs. | Soda Ash dissolved in |
| 6¼ | gals. | Water. Add |
| 11 | lbs. | Barium Chloride dissolved in |
| 12½ | gals. | Water |
| | | Wash free of Chlorides and add |
| 50 | lbs. | China Clay made into a paste with a little water. to this base add, in the order given |
| 2 | lbs. | National Auramine NAC dissolved in |
| 50 | gals. | Water |
| 2¼ | lbs. | Tannic Acid dissolved in |
| 15 | gals. | Water |
| 1⅛ | lbs. | Tartar Emetic dissolved in |
| 7½ | gals. | Water |
| | | Precipitate about 105° F. |

## 2. *National Chrysoidine Y Extra*

Prepare in the same manner as No. 1.

## 3. *National Bismarck Brown Y Extra*

Prepare in the same manner as No. 1.

## 4. *National Safranine A*

Prepare in the same manner as No. 1.

## 5. *National Fuchsine NB Crystals*

Prepare in the same manner as No. 1.

### 6. *National Rhodamine B*

10 lbs. Blanc Fixe made into a paste with a small amount water, is stirred into a solution of
2 lbs. National Rhodamine B dissolved in
10 gals. Water
Add at 105° F.
6 lbs. Tannic Acid dissolved in
37½ gals. Water
3 lbs. Tartar Emetic dissolved in
18¾ gals. Water.

### 7. *National Methyl Violet 2B Conc. Crystals*

Prepare in the same manner as No. 1.

### 8. *National Safranine 6B*

Prepare in the same manner as No. 1.

### 9. *National Methylene Blue 2B*

Prepare in the same manner as No. 1.

### 10. *National Brilliant Green B Crystals*

Prepare in the same manner as No. 1.

### 11. *National Victoria Green WB Crystals*

Prepare in the same manner as No. 1.





### 12. *National Quinoline Yellow*

Dissolve
5½ lbs. National Quinoline Yellow in
34 gals. Water and add
10 lbs. Blanc Fixe, add
9 lbs. Aluminum Sulfate dissolved in
22½ gals. Water and
3 lbs. Soda Ash dissolved in
7½ gals. Water
Precipitate with
15 lbs. Barium Chloride dissolved in
37 gals. Water about 90° F.

### 13. *National Lake Yellow Extra Conc.*

2½ lbs. National Lake Yellow Extra Conc. dissolved in
31 gals. Water and add
10 lbs. Blanc Fixe. Then add
6 lbs. Aluminum Sulfate dissolved in
8½ gals. Water.
Precipitate at 70° F. with
25 lbs. Barium Chloride Crystals dissolved in
31 gals. Water and
3 lbs. Soda Ash dissolved in
3¾ gals. Water.

### 14. *National Azo Yellow A5W*

Dissolve
3 lbs. National Azo Yellow A5W
27 gals. Water and add
8 lbs. Aluminum Sulfate dissolved in
20 gals. Water and
2 lbs. Soda Ash dissolved in
5 gals. Water and add
10 lbs. Blanc Fixe made into a paste with a small amount of Water.
Precipitate at 120° F., with
7 lbs. Barium Chloride dissolved in
18 gals. Water.

15. *National Metanil Yellow 1955*

Dissolve
9 lbs. Aluminum Sulfate in
22½ gals. Water and
5 lbs. Soda Ash dissolved in
12½ gals. Water and add
10 lbs. Blanc Fixe made into a paste with a little water and
4 lbs. National Metanil Yellow 1955 dissolved in
50 gals. Water
Precipitate with
11½ lbs. Barium Chloride Crystals dissolved in
20 gals. Water.

16. *National Erie Yellow F*

Prepare in the same manner as No. 30.

17. *National Lake Orange A Conc.*

Prepare in the same manner as No. 18 except that
20 lbs. Barium Chloride Crystals, dissolved in
25 gals. Water are necessary.

18. *National Croceine Orange Y Extra*

10 lbs. Blanc Fixe is made into a thin paste and stirred into the following:
Dissolve
3 lbs. Soda Ash in
3½ gals. Water and stir into a solution of
6 lbs. Aluminum Sulfate dissolved in
7½ gals. Water.
Boil and cool to 85° F., and add
5 lbs. National Croceine Orange Y Conc. dissolved in
60 gals. Water
Precipitate with
10 lbs. Barium Chloride Crystals dissolved in
12½ gals. Water.





19. *National Lake Orange R Conc.*

Prepare in the same manner as No. 18 except that
15 lbs. Barium Chloride Crystals dissolved in
19 gals. Water are necessary.

20. *National Alizarine Orange RP Paste*

Dissolve
10 lbs. Aluminum Sulfate in
12½ gals. Water at 70° F.
Precipitate with
5 lbs. Soda Ash dissolved in
6¼ gals. Water.
Boil 30 minutes, wash with hot water until free of Sulfates. Add
1½ lbs. Calcium Chloride dissolved in
2 gals. Water and
13½ ozs. Ammonium Phosphate dissolved in
1 gal. Water. Then add
10 lbs. National Alizarine Orange RP Paste and
2 lbs. Turkey Red Oil (Ammonium Salt) dissolved in
2½ gals. Water
Stir well for several hours, heat slowly to a boil from one to three hours.

21. *National Superchrome Red B*

Prepare in the same manner as No. 22 except that
Ten parts of Blanc Fixe are added for one part of lake.

## 22. *National Superchrome Red B*

10 lbs. National Superchrome Red B are dissolved in
62 gals. Water and add
3½ lbs. Soda Ash dissolve in
9½ gals. Water
Precipitate at 105° F., with
20 lbs. Barium Chloride dissolved in
50 gals. Water and add
7 lbs. Aluminum Sulfate dissolved in
17 gals. Water.

## 23. *National Erie Fast Orange A*

Prepare in the same manner as No. 17.

## 24. *National Lake Scarlet R*

Dissolve
9 lbs. Aluminum Sulfate in
22½ gals. Water; add
3 lbs. Soda Ash dissolved in
7½ gals. Water and
10 lbs. Blanc Fixe made into a paste with a little Water. Then add
4 lbs. National Lake Scarlet R dissolved in
50 gals. Water and
Precipitate at 100° F., with
12½ lbs. Barium Chloride dissolved in
31 gals. Water.

## 25. *National Erie Fast Scarlet 4BA*

Prepare in the same manner as No. 17.

## 26. *National Croceine Scarlet MOO*

Prepare in the same manner as No. 30, except that
10 lbs. Barium Chloride dissolved in
25 gals. Water are required.





## 27. *National Azo Rubine Extra*

Dissolve
7 lbs. Aluminum Sulfate in
8½ gals. Water and add
3 lbs. Soda Ash dissolved in
4 gals. Water. Then add
10 lbs. Blanc Fixe
Boil and cool to 80° F.; add
2½ lbs. National Azo Rubine Extra dissolved in
31 gals. Water and
16 lbs. Barium Chloride dissolved in
18 gals. Water.

## 28. *National Alizarine NAC 20% Paste*

Prepare in the same manner as for No. 20.

## 29. *National Azo Bordeaux*

Prepare in the same manner as for No. 30.

## 30. *National Lake Red 40F*

Dissolve
9 lbs. Aluminum Sulfate in
22½ gals. Water and add slowly with constant stirring
3 lbs. Soda Ash dissolved in
7½ gals. Water. Add
10 lbs. Blanc Fixe made into paste with a little Water and
4 lbs. National Lake Red 40F dissolved in
50 gals. Water
Precipitate at 110° F. with
12½ lbs. Barium Chloride dissolved in
31 gals. Water.

31. *National Alphazurine A*

Dissolve
12 lbs. Aluminum Sulfate in
15 gals. Water and add slowly
3 lbs. Soda Ash dissolved in
3¾ gals. Water, add
10 lbs. Blanc Fixe and
2 lbs. National Alphazurine A dissolved in
25 gals. Water
Precipitate at 100° F., with
14½ lbs. Barium Chloride in
18 gals. Water.
On addition of a small amount of Tannic Acid the lake is improved in light fastness.

32. *National Lake Violet 4BN*

12 lbs. Aluminum Sulfate are dissolved in
30 gals. Water and add slowly
3 lbs. Soda Ash dissolved in
7½ gals. Water. Add
10 lbs. Blanc Fixe and
2 lbs. National Lake Violet 4BN dissolved in
25 gals. Water.
Precipitate at 100-110° F., with
15 lbs. Barium Chloride
37½ gals. Water.

33. *National Alizarine Sapphire*

9 lbs. Aluminum Sulfate are dissolved in
22½ gals. Water and add
3 lbs. Soda Ash dissolved in
7½ gals. Water. Add
10 lbs. Blanc Fixe and
2 lbs. National Alizarine Sapphire dissolved in
25 gals. Water.
Precipitate at 100-110° F., with
10 lbs. Barium Chloride dissolved in
25 gals. Water.





34. *National Alkali Blue B*

Dissolve
50 lbs. Aluminum Sulfate in
60 gals. Water and
Precipitate at 150° F. with
25 lbs. Soda Ash dissolved in
30 gals. Water. Then add
2½ lbs. National Alkali Blue B dissolved in
25 gals. Water.

35. *National Fast Lake Violet B*

Prepare in the same manner as No. 17.

36. *National Lake Green L Extra*

Prepare in the same manner as No. 31.

37. *National Lake Green B*

Prepare in the same manner as No. 31.

38. *National Scarlet Developer O*

SOLUTION A:
33 lbs. Scarlet Developer O are dissolved in
64 lbs. Hydrochloric Acid 20 Bé and
100 lbs. (12 gallons) boiling water
When solution is complete, add
200 lbs. (24 gals.) cold Water and cool to 40° F.
A solution of
17 lbs. Sodium Nitrite (98%) in
34 lbs. (4 gals.) of Water, is then added very slowly with continuous stirring. After stirring one half hour, add
2700 lbs. (340 gals.) of cold Water.

SOLUTION B:

27 lbs. Beta Naphthol
35 lbs. Caustic Soda 40° Bé solution
31 lbs. Soda Ash
90 lbs. Sodium Acid Phosphate Crystals dissolved in
1200 lbs. Water
(270 lbs. Blanc Fixe)

Pour Solution A into Solution B with constant stirring and wash by decantation.

## 39. *National Red Developer P*

SOLUTION A:

19 lbs. National Red Developer P are made into a smooth paste with
30 lbs. (4 gals.) of cold water.
42 lbs. Sulfuric Acid 98% are then added slowly, with stirring, the heat developed causing solution to take place. When solution is complete pour into
2500 lbs. (300 gals.) cold water and cool to 40° F.
10 lbs. Sodium Nitrite (98%) dissolved in
20 lbs. (2½ gals.) of water is then added very slowly, with continuous stirring, and stirring is continued for one hour longer. At this stage the solution should be practically clear, with only a slight turbidity.

SOLUTION B:

19 lbs. Beta Naphthol
24 lbs. Caustic Soda 40° Bé solution
22 lbs. Soda Ash
63 lbs. Sodium Acid Phosphate Crystals dissolved in
800 lbs. Water
190 lbs. Blanc Fixe

Pour Solution A into Solution B with constant stirring and wash by decantation.





## 40. *National Paranitraniline NAC*

SOLUTION A:

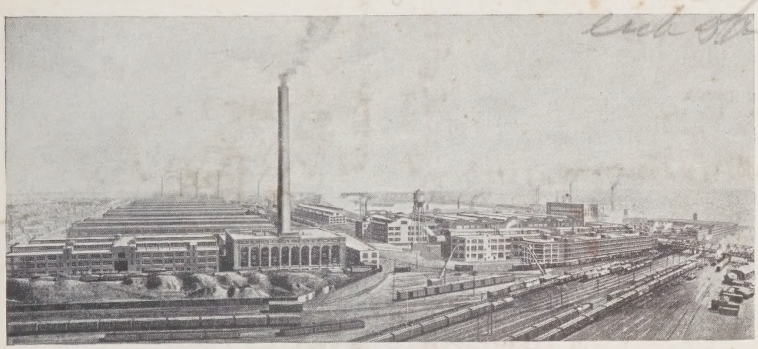
30 lbs. Paranitranline NAC are dissolved in
360 lbs. Boiling Water and
84 lbs. Hydrochloric Acid 20° Bé and the mixture boiled until the solution is clear.
Slowly add, with constant stirring
700 lbs. (145 gals.) cold water, which precipitates the paranitraniline in a very finely divided form, which is essential to the subsequent diazotization. Cool to 40° F. and add as quickly as possible
18 lbs. Sodium Nitrite (98%) dissolved in
240 lbs. (50 gals.) of water at 40° F.; stir until the solution is clear and add
700 lbs. (145 gals.) cold water.

SOLUTION B:

31 lbs. Beta Naphthol
31 lbs. Caustic Soda 40° Bé solution
31 lbs. Soda Ash dissolved in
1200 lbs. Water
310 lbs. Blanc Fixe

Pour Solution A into Solution B with constant stirring and wash by decantation.

See also our Designs for Bill Size Sheets and Rolls



BUFFALO

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THE GETTY CENTER LIBRARY

National
Auramine NAC

National
Chrysoidine Y Extra

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National
Safranine A

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Rhodamine B

National
Methyl Violet 2B Conc.
Crystals

National
Safranine 6B

National
Methylene Blue 2B

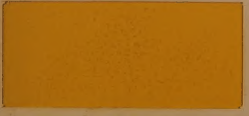
National
Brilliant Green B
Crystals

National
Victoria Green WB
Crystals

National
Quinoline Yellow

National
Lake Yellow Extra
Conc.

National
Azo Yellow A5W



National
Metanil Yellow 1955

National
Erie Yellow F

National
Lake Orange A Conc.

National
Croceine Orange Y
Conc.

National
Lake Orange R Conc.

National
Alizarine Orange RP
Paste

National
Superchrome Red B

National
Croceine Scarlet MOO

National
Superchrome Red B

National
Azo Rubine Extra

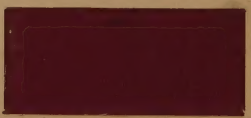
National
Erie Fast Orange A

National
Alizarine NAC 20%
Paste

National
Lake Scarlet R

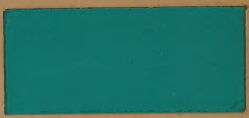
National
Azo Bordeaux

National
Erie Fast Scarlet 4BA



National
Lake Red 40 F

National
Alphazurine A



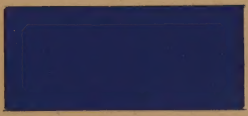
National
Lake Green L Extra

National
Lake Violet 4BN

National
Lake Green B

National
Alizarine Sapphire

National
Scarlet Developer O
with Beta Naphthol



National
Alkali Blue B

National
Red Developer P
with Beta Naphthol

National
Fast Lake Violet B

National
Paranitraniline
with Beta Naphthol